

1. An autonomic management apparatus for autonomic management of system resources on a grid computing system, the apparatus comprising:
 - a monitor module configured to monitor the grid computing system for a trigger event;
 - a policy module configured to access one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system; and
 - a regulation module configured to autonomically regulate the system resource in response to a recognized trigger event according to one of the plurality of system policies.
2. The apparatus of claim 1, wherein the trigger event comprises one of an initiation trigger event, a regulation trigger event, and a prediction trigger event.
3. The apparatus of claim 1, wherein the operational control parameter comprises a command to regulate the system resource.
4. The apparatus of claim 1, wherein the system resource comprises one of a client processor capacity, a client storage capacity, and a client memory capacity allocated to the grid computing system.
5. The apparatus of claim 1, wherein the regulation module comprises a reservation module configured to reserve the system resource for a grid system operation.

6. The apparatus of claim 1, wherein the regulation module comprises a termination module configured to terminate a reservation of a system resource for a grid system operation.

7. The apparatus of claim 1, wherein the regulation module comprises an arbitration module configured to arbitrate conflicting grid system operations according to an arbitration policy.

8. The apparatus of claim 1, wherein the regulation module comprises a profile module configured to store a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system.

9. The apparatus of claim 1, wherein the plurality of system policies comprises at least one of a system prediction policy, a system regulation policy, and a system termination policy.

10. A local autonomic management apparatus for autonomic management of system resources on a grid computing system in conjunction with a global autonomic management apparatus, the apparatus comprising:

- a monitor module configured to monitor the client for a trigger event, the trigger event comprising one of an initiation trigger event, a regulation trigger event, and a prediction trigger event;
- a policy module configured to access one of a plurality of client policies, each of the plurality of client policies corresponding to an operational control parameter of a client resource;
- a regulation module configured to autonomically regulate the client resource in response to a recognized trigger event according to one of the plurality of system policies; and
- a notification module configured to notify the global autonomic management apparatus of the recognized trigger event.

11. The apparatus of claim 10, further comprising an allocation module configured to allocate a client resource as a system resource, the client resource comprising one of a client processor capacity, a client storage capacity, and a client memory capacity.

12. The apparatus of claim 10, further comprising a reclamation module configured to reclaim a client resource that is allocated as a system resource.

13. The apparatus of claim 10, further comprising an initiation module configured to initiate an application program in response to the trigger event.

14. The apparatus of claim 10, further comprising a termination module configured to terminate an application program in response to the trigger event.

15. The apparatus of claim 10, further comprising a profile module configured to store a client resource profile, the client resource profile identifying a client resource, the client resource allocated by the client to the grid computing system.

16. The apparatus of claim 10, wherein the plurality of client policies comprise at least one of a client prediction policy, a client initiation policy, a client regulation policy, and a client termination policy.

17. A system for autonomic management of system resources on a grid computing system, the system comprising:

a local autonomic management apparatus connected to the grid computing system, the local autonomic management apparatus configured to monitor for a trigger event;

a global autonomic management apparatus connected to the grid computing system, the global autonomic management apparatus configured to receive a trigger event notification from the local autonomic management apparatus;

a policy module configured to access one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system; and

a regulation module configured to autonomically regulate the system resource in response to a recognized trigger event according to one of the plurality of system policies.

18. The system of claim 17, further comprising a subscription manager configured to determine a user fee associated with the local on-demand management apparatus, the user fee based at least in part on the autonomic regulation of the system resource.

19. The system of claim 17, further comprising a subscription manager configured to manage the allocated performance resource and to control the level of service available to the local on-demand management apparatus, the level of service based at least in part on the autonomic regulation of the system resource.

20. A method for autonomic management of system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event;
accessing one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system; and
regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies.

21. The method of claim 20, further comprising reserving the system resource for a grid system operation.

22. The method of claim 20, further comprising terminating a reservation of a system resource for a grid system operation.

23. A method for autonomic management of grid system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event, the trigger event comprising one of an initiation trigger event, a regulation trigger event, and a prediction trigger event;

accessing one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system, the operational control parameter comprising a command to regulate the system resource;

regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies and, the system resource comprising one of a client processor capacity, a client storage capacity, and a client memory capacity allocated to the grid computing system;

storing a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system.

24. A computer readable storage medium comprising computer readable code configured to carry out a method for autonomic management of system resources on a grid computing system, the method comprising:

monitoring the grid computing system for a trigger event;

accessing one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system; and

regulating the system resource in response to recognized trigger event according to one of the plurality of system policies.

25. The computer readable storage medium of claim 24, wherein the trigger event comprises one of an initiation trigger event, a regulation trigger event, and a prediction trigger event.
26. The computer readable storage medium of claim 24, wherein the method further comprises reserving the system resource for a grid system operation.
27. The computer readable storage medium of claim 24, wherein the method further comprises terminating a reservation of a system resource for a grid system operation.
28. The computer readable storage medium of claim 24, wherein the method further comprises arbitrating conflicting grid system operations according to an arbitration policy.
29. The computer readable storage medium of claim 24, wherein the method further comprises storing a system resource profile, the system resource profile identifying a system resource of a client, the system resource allocated by the client to the grid computing system.

30. An apparatus for autonomic management of grid system resources on a grid computing system, the apparatus comprising:

means for monitoring the grid computing system for a trigger event;

means for accessing one of a plurality of system policies, each of the plurality of system policies corresponding to an operational control parameter of a system resource of the grid computing system; and

means for regulating the system resource in response to a recognized trigger event according to one of the plurality of system policies.